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For Immediate Release
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SRS Salt Waste Processing: 5 Years of Success

AIKEN, S.C. (April 22, 2013) – Something unique in environmental risk reduction involving the processing of radioactive salt waste is taking place at the U.S. Department of Energy's (DOE) Savannah River Site (SRS) near Aiken, SC.

Savannah River Remediation (SRR), SRS's liquid waste contractor, is safely and successfully disposing of salt waste from massive underground storage tanks – as the only project in DOE complex to do so. The work means SRR is reducing the risk for its neighbors, a key component in the protection of human health and the environment.

Utilizing the latest in technology, SRR continues to treat and dispose of an inventory of approximately 34 million gallons of radioactive salt waste through separate waste processing and dispositioning facilities, the Interim Salt Disposition Process facilities along with the Saltstone Facilities and Saltstone Disposal Units.

To Operationally Close Cold War Waste Tanks, Removing Salt Waste Is First
Salt waste comprises about 90 percent of the waste volume in the tanks. Five years ago, the realm of operationally closing hazardous waste tanks began a new era at SRS with the inauguration of a new way to process salt waste.

Originally thought to be a salt processing system lasting up to three years, the salt disposition process continues to surpass earlier expectations and has positioned itself for continued operation as required by South Carolina permit, according to Dave Olson, SRR President and Project Manager.

"The salt processing facilities have surpassed expected operational results by processing more efficiently, at a higher throughput rate, and for a longer period than expected," Olson said.

Placed into operations in April 2008, the SDP, which consists of two separations facilities – the Actinide Removal Process (ARP) and the Modular Caustic Side Solvent Extraction Unit (MCU), removes nearly all radioactive isotopes from the salt waste and separates the salt waste into highly radioactive and decontaminated waste streams for dispositioning. The highly radioactive waste goes to the Defense Waste Processing Facility and the decontaminated waste goes to the Saltstone Facilities.

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Salt Waste Processing is Key to Operationally Closing SRS Waste Tanks
Terrel Spears, Assistant Manager for Waste Disposition Project, U.S. Department of Energy (DOE)-Savannah River Operations Office, stated the salt disposition process has performed very well over its life.

“Our salt processing technologies, which have proven to be very effective in removing radioactive constituents from salt waste, are an integral part of DOE’s strategy to complete tank closures and protect workers, the public and the environment,” Spears said. “Salt waste processing is key to emptying and closing waste tanks at SRS.”

The SDP marked a record production year in Fiscal Year 2012 by processing over 704,000 gallons of salt waste, more than 4,000 gallons over its target number of 700,000 gallons. Since placed into operations in 2008, salt disposition has processed over 3.5 million gallons of salt waste.

Salt processing is expected to be enhanced later this year when a new chemical extraction solvent will be incorporated in the MCU. The new solvent, called the Next Generation Solvent (NGS), will extract cesium from the salt waste at an efficiency more than 100 times greater than the existing solvent, thus allowing SRR to increase its mission to reduce risk from the stored waste.

Saltstone Facilities Set Monthly Records
In October 2012, the Saltstone Facilities processed 664,129 gallons of decontaminated salt solution for a single month record and accomplished a two-month record in September and October 2012 by processing 1.1 million gallons of salt solution.

During FY12, Saltstone processed 1,251,312 gallons of salt solution and disposed of the waste on-site in concrete vaults. Saltstone’s fiscal year target was 1.2 million gallons.

New Technology Aids in Success of Salt Waste Processing
On-site disposal of the decontaminated salt solution also has improved with the advent of the Saltstone Disposal Units (SDU).

The new disposal unit, SDU 2, comprises two separate cells that are circular in design, each holding approximately 2.9 million gallons of the cement grout. SDU 2 began accepting the cement grout in October 2012.

State of South Carolina Approves of SRS Work to Close Waste Tanks
SRR’s success in salt waste processing, leading to operationally closing SRS waste tanks, has been instrumental in reducing the single greatest environmental risk in South Carolina, according to Catherine Templeton, South Carolina Department of Health and Environmental Control Director.

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"We've worked hard with SRS and other federal partners to resolve many complex tank closure issues and reduce the risk of an environmental incident. This work has paved the way for the closure of Tanks 18 and 19, and for the remaining tanks to close at a faster pace," Templeton said. "We look forward to a continued collaboration with SRS in laying the groundwork for more cleanup activities."

SRS is owned by DOE. SRR, the liquid waste contractor, is composed of a team of companies led by URS Corp. with partners Bechtel National, CH2M Hill and Babcock & Wilcox. Critical subcontractors for the contract are AREVA, Energy Solutions and URS Professional Solutions.

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Summary

- SRR safely stores approximately 34 million gallons of salt waste
- Salt waste comprises about 90 percent of the waste volume in the storage tanks
- Salt disposition process marked a record production year in FY12 by processing over 704,000 gallons of salt waste; target was 700,000 gallons
- SDP has processed over 3.5 million gallons of salt waste since beginning operations in April 2008, and will celebrate its fifth anniversary in April; two years past its planned operations period
- Saltstone Facilities marked a single month production record in October 2012 by processing 664,129 gallons of decontaminated salt solution
- Saltstone Facilities marked a two-month production record in September and October 2012 by processing 1.1 million gallons of decontaminated salt solution